

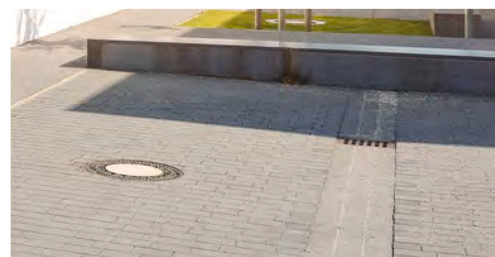


INSTALL IT. TRUST IT.

SH/ArmaFlex

SH/ArmaFlex is specially tailored to meet the energy regulations to effectively ensure fast return on investments in heating and plumbing applications

- // Complete system solution
- // Build-in with Microban for a better indoor air quality
- // Fast return on investment
- // Outstanding energy saving
- // Range meets energy regulations
- // FM Approved



 **armacell**[®]
ArmaFlex[®]

INSTALL IT. TRUST IT.

SH/ArmaFlex

ACTIVE MICROBAN® ANTIMICROBIAL PROTECTION

When microbes come in contact with the insulation surface, MICROBAN® protection penetrates the cell wall of the microorganism, disabling its ability to function, grow and reproduce. Because the protection is built in during the manufacturing process, it will not wash off or wear away. This gives products with MICROBAN® technology an added level of protection against mould and mildew, thus positively contributing to the indoor air quality of the surrounding ambients. Insulation material equipped with MICROBAN® is therefore the ideal long-term solution for sanitary and heating systems in public buildings such as schools, hospitals, elderly homes, offices and airports.

// Energy Savings

Since the European Energy Performance of Buildings Directive (EPBD), the requirements of energy efficiency for both new and refurbished buildings increased. With this, the energy consumption levels became more visible and transparent to owners, tenants and users through a building certification, as an indispensable part of the building documentation. Correct insulation of heating and sanitary pipes is critical for the optimum energy performance of a building - which is ensured by the use of the SH/ArmaFlex range.

// Complete System

Armacell offers a complete carefully considered and coordinated system solution for any professional insulation challenge: SH/ArmaFlex standard, self-adhesive and endless tubes and sheets, tape and accessories. ArmaFix X pipe supports to avoid thermal bridging, ArmaFlex Protect fire barrier as well as ArmaProtect 1000 firestop filler. The wide range of specially developed accessories such as the new generation of adhesives and the ArmaFlex Toolbox for applying ArmaFlex insulation materials make installation even easier.



INVESTMENT PAYBACK

The static amortisation of the initial costs by using SH/ArmaFlex 25 mm is less than one year.

- compared to initial situation of noninsulated pipes
- domestic hot water and heating (70/55 °C)
- pipe lines located in unheated area
- fuel costs 0,55 € / liter

Payback time in less than 6 months!

PROTECTION THAT LIVES ON
MICROBAN®



TECHNICAL DATA - SH/ARMAFLEX

Brief description	Highly flexible closed-cell extruded insulation material with low thermal conductivity to minimise energy losses on heating and plumbing installations.
Material type	Elastomeric foam based on synthetic rubber. Factory-made flexible elastomeric foam (FEF), according to EN 14304.
Additional material information	Self-adhesive coating: pressure-sensitive adhesive coating on modified acrylate basis with mesh structure, covered with polyethylene foil. Traces of silicon can be found on the protection paper/foil used to protect self-adhesive closures.
Product colour range	Grey
Special features	SH/Armaflex is a closed-cell insulation material for heating and plumbing systems. Its water vapour diffusion resistance value is sufficient to comply with the condensation control requirements for these applications and especially for cold water pipelines.
Applications	Insulation/protection of pipes (heating, domestic hot and cold water, sewage water, drain water) and other heating and plumbing installations to optimally prevent heat losses and save energy.
Installation	Certified and compatible adhesive for a long-term performing system is ArmaFlex 520.
Declaration of performance	Declaration of Performance in accordance with Article 7(3) of Regulation (EU) No 305/2011 is available at www.armacell.com/DoP .

Property	Value / Assessment	Standard / Test method
Temperature range		
Service temperature ¹	Max. °C ² 110 Remarks Minimum service temperature: As is usual in plumbing and heating installations.	EN 14706, EN 14707, EN 14304
Thermal conductivity		
Declared thermal conductivity	Øm λd ≤ [W/(m·K)] Range Formula λd = [36 + 0,1 · Øm + 0,0008 · (Øm-40) ²]/1000	40 °C 0,036 Tubes of thickness: 9 mm-11 mm
Declared thermal conductivity	Øm λd ≤ [W/(m·K)] Range Formula λd = [38 + 0,1 · Øm + 0,0008 · (Øm-40) ²]/1000	40 °C 0,038 All other tubes, sheets and tape
Fire Performance and Approvals		
Reaction to fire	Tubes: up to 45 mm B(L)-s3, d0 Tubes: > 45 mm C(L)-s3, d0 Sheets: 10 mm C-s3, d0 Sheets: 20 mm D-s3, d0 Tapes: B-s3, d0	EN 13501-1, EN ISO 11925-2, EN 13823
FM approved	4924 - Pipe and Duct Insulation	UBC26-3
Passive fire protection		
Fire resistance of elements of construction	EI 30 - EI 90	EN 13501-2, EN 1366-3
Fire performance		
Practical fire behaviour	Self-extinguishing, does not drip, does not spread flames	
Physical attributes		
Dimensions and tolerances	in accordance with EN 14304, table 1	EN 822, EN 823, EN 13467

Property	Value / Assessment	Standard / Test method
Acoustic performance		
Reduction of structure-borne sound transmission	≤ 27 dB (A)	EN ISO 3822-1
Weather and UV resistance		
UV resistance ³	Protection against UV radiation is necessary (see Technical Bulletin no. 142).	
Health and environment		
Volatile organic compounds (VOC) content	Fulfills all VOC requirements (French, Italian, Belgian, German AgBB, Blauer Engel and Eurofins Indoor Air Comfort GOLD).	ISO 16000 Parts 3, 6 & 9
Antimicrobial behaviour	In-built Microban active antimicrobial protection: No fungal growth observed.	EN ISO 846, VDI 6022
Environmental aspects	Meets the requirements for sustainable construction in combination with ArmaFlex SF990 adhesive such as LEED.	
Environmental Product Declaration (EPD)	Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20200221-IBB1-EN", Institut Bauen und Umwelt e.V. (IBU)	ISO 14025, EN 15804+A2
Green building assessment	Meets the sustainable construction requirements for LEED v4.1, BREEAM international, WELL v2 and DGNB.	
Additional features	SCCP, MCCP-free	
Other technical features		
Shelf life	Self-adhesive tapes, self-adhesive tubes: 1 year	
Storage	Can be stored in dry, clean rooms at normal relative humidity (50% - 70%) and ambient temperature (0 °C -35 °C).	

¹For use in temperatures beyond the published value, please contact Technical Services.

²+85 °C, for products with a self-adhesive layer.

³If ArmaFlex is used outdoors or in applications under UV radiation, it should be protected with a covering such as ArmaClad Arma-Chek within 3 days of installation.

Tube – standard. Grey. 2.0 m Length.

9 mm						10 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
64	SH-09X064	65	68	7612207134681	36 m	12	SH-10X012	13	16	7612207246070	180 m
76	SH-09X076	77	90	7612207134704	28 m	15	SH-10X015	16	19	7612207246087	150 m
89	SH-09X089	90	93	7612207134711	24 m	18	SH-10X018	19	22	7612207246117	130 m
108	SH-09X108	109	114	7612207134728	20 m	20	SH-10X020	21	24	7612207279450	100 m
114	SH-09X114	115	120	7612207134735	20 m	22	SH-10X022	23	26	7612207246148	100 m
-	-	-	-	-	-	25	SH-10X025	26	29	7612207279474	80 m
-	-	-	-	-	-	28	SH-10X028	29	32	7612207246179	80 m
-	-	-	-	-	-	32	SH-10X032	33	36	7612207279498	70 m
-	-	-	-	-	-	35	SH-10X035	36	39	7612207246193	70 m
-	-	-	-	-	-	40	SH-10X040	41	44	7612207350838	60 m
-	-	-	-	-	-	42	SH-10X042	43	46	7612207246216	60 m
-	-	-	-	-	-	48	SH-10X048	49	52	7612207277173	50 m
-	-	-	-	-	-	50	SH-10X050	51	54	7612207350852	44 m
-	-	-	-	-	-	54	SH-10X054	55	58	7612207277180	44 m
-	-	-	-	-	-	60	SH-10X060	61	64	7612207277203	40 m

Other information

Thickness tolerance 9 - 13 mm ± 1,5 mm
 19 - 30 mm ± 2,5 mm
 < 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – standard. Grey. 2.0 m Length.

13 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
76	SH-13X076	77	80	7612207133622	24 m	12	SH-19X012	13	16	7612207350562	72 m
89	SH-13X089	90	93	7612207133639	18 m	15	SH-19X015	16	19	7612207133684	72 m
114	SH-13X114	115	120	7612207133653	12 m	18	SH-19X018	19	22	7612207133714	66 m
-	-	-	-	-	-	20	SH-19X020	21	24	7612207278941	60 m
-	-	-	-	-	-	22	SH-19X022	23	26	7612207133738	60 m

Tube – standard. Grey. 2.0 m Length.

13 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
-	-	-	-	-	-	25	SH-19X025	26	29	7612207278965	50 m
-	-	-	-	-	-	28	SH-19X028	29	32	7612207133769	48 m
-	-	-	-	-	-	32	SH-19X032	33	36	7612207279054	32 m
-	-	-	-	-	-	35	SH-19X035	36	39	7612207133790	40 m
-	-	-	-	-	-	40	SH-19X040	41	44	7612207350579	32 m
-	-	-	-	-	-	42	SH-19X042	43	46	7612207133820	32 m
-	-	-	-	-	-	48	SH-19X048	49	52	7612207133851	30 m
-	-	-	-	-	-	50	SH-19X050	51	54	7612207350593	26 m
-	-	-	-	-	-	54	SH-19X054	55	58	7612207133882	26 m
-	-	-	-	-	-	60	SH-19X060	61	64	7612207133912	24 m
-	-	-	-	-	-	76	SH-19X076	77	80	7612207133936	18 m
-	-	-	-	-	-	89	SH-19X089	90	93	7612207133943	16 m

Other information

Thickness tolerance
 9 - 13 mm ± 1,5 mm
 19 - 30 mm ± 2,5 mm
 < 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – standard. Grey. 2.0 m Length.

24 mm						30 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-24X015	16	19	7612207135039	36 m	40	SH-30X040	41	44	7612207386981	18 m
18	SH-24X018	19	22	7612207135053	36 m	42	SH-30X042	43	46	7612207387094	18 m
20	SH-24X020	21	24	7612207279078	36 m	48	SH-30X048	49	52	7612207326451	18 m
22	SH-24X022	23	26	7612207135077	36 m	54	SH-30X054	55	58	7612207326444	16 m
25	SH-24X025	26	29	7612207279092	32 m	60	SH-30X060	61	64	7612207326437	12 m
28	SH-24X028	29	32	7612207135091	32 m	64	SH-30X064	65	68	7612207386998	12 m
32	SH-24X032	33	36	7612207350647	24 m	76	SH-30X076	77	80	7612207326420	10 m
35	SH-24X035	36	39	7612207278996	24 m	89	SH-30X089	90	93	7612207326413	8 m

Tube – standard. Grey. 2.0 m Length.

24 mm						30 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
42	SH-24X042	43	46	7612207135114	24 m	110	SH-30X110	111	114	7612207350784	8 m
48	SH-24X048	49	52	7612207135145	24 m	114	SH-30X114	115	118	7612207326406	8 m
-	-	-	-	-	-	140	SH-30X140	141	144	7612207326390	6 m

Other information

Thickness tolerance 9 - 13 mm ± 1,5 mm
19 - 30 mm ± 2,5 mm
< 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – standard. Grey. 2.0 m Length.

32 mm						34 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
54	SH-32X054	55	58	7612207188943	12 m	60	SH-34X060	61	64	7612207188967	10 m

Other information

Thickness tolerance 9 - 13 mm ± 1,5 mm
19 - 30 mm ± 2,5 mm
< 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – standard. Grey. 2.0 m Length.

36 mm						44 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
28	SH-36X028	29	32	7612207135206	18 m	76	SH-44X076	77	80	7612207188981	8 m
35	SH-36X035	36	39	7612207135213	16 m	-	-	-	-	-	-
110	SH-36X110	111	115	7612207350807	6 m	-	-	-	-	-	-
114	SH-36X114	115	120	7612207134278	6 m	-	-	-	-	-	-
140	SH-36X140	141	146	7612207134285	4 m	-	-	-	-	-	-
160	SH-36X160	161	166	7612207188936	4 m	-	-	-	-	-	-
168	SH-36X168	169	174	7612207134292	4 m	-	-	-	-	-	-

Other information

Thickness tolerance 9 - 13 mm ± 1,5 mm
19 - 30 mm ± 2,5 mm
< 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – standard. Grey. 2.0 m Length.

46 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
42	SH-46X042	43	46	7612207135305	8 m
48	SH-46X048	49	52	7612207135312	8 m
Other information					
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm			
Length tolerance		± 1,5 %			

Coil. Grey

10 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-10X015/E	16	19	7612207246094	35 m
18	SH-10X018/E	19	22	7612207246124	30 m
22	SH-10X022/E	23	26	7612207246155	25 m
28	SH-10X028/E	29	32	7612207246223	20 m
Other information					
Thickness tolerance		9 - 13 mm ± 1,5 mm 19 - 30 mm ± 2,5 mm < 32 mm ± 3 mm			
Length tolerance		± 1,5 %			

Tube – self-seal. Grey. 2.0 m Length.

10 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
12	SH-10X012-A	13	16	7612207300567	180 m	15	SH-19X015-A	16	19	7612207304237	72 m
15	SH-10X015-A	16	19	7612207300574	150 m	18	SH-19X018-A	19	22	7612207304244	66 m
18	SH-10X018-A	19	22	7612207300581	130 m	20	SH-19X020-A	21	24	7612207304251	60 m
20	SH-10X020-A	21	24	7612207304350	100 m	22	SH-19X022-A	23	26	7612207304268	60 m
22	SH-10X022-A	23	26	7612207300598	100 m	25	SH-19X025-A	26	29	7612207304275	50 m
25	SH-10X025-A	26	29	7612207304367	80 m	28	SH-19X028-A	29	32	7612207304282	48 m
28	SH-10X028-A	29	32	7612207300550	80 m	32	SH-19X032-A	33	36	7612207304398	32 m
32	SH-10X032-A	33	36	7612207304374	70 m	35	SH-19X035-A	36	39	7612207304299	40 m
35	SH-10X035-A	36	39	7612207300222	70 m	40	SH-19X040-A	41	44	7612207350586	32 m
40	SH-10X040-A	41	43	7612207350845	60 m	42	SH-19X042-A	43	46	7612207301861	32 m
42	SH-10X042-A	43	46	7612207300451	60 m	48	SH-19X048-A	49	52	7612207304312	30 m

Tube – self-seal. Grey. 2.0 m Length.

10 mm						19 mm					
Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]	Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
48	SH-10X048-A	49	52	7612207300475	50 m	50	SH-19X050-A	51	54	7612207350609	26 m
50	SH-10X050-A	51	54	7612207350869	44 m	54	SH-19X054-A	55	58	7612207304329	26 m
54	SH-10X054-A	55	58	7612207300543	44 m	60	SH-19X060-A	61	64	7612207304336	24 m
60	SH-10X060-A	61	64	7612207300536	40 m	-	-	-	-	-	-

Other information

Thickness tolerance
 9 - 13 mm ± 1,5 mm
 19 - 30 mm ± 2,5 mm
 < 32 mm ± 3 mm

Length tolerance ± 1,5 %

Tube – self-seal. Grey. 2.0 m Length.

Pipe Ø [mm]	Item	Inner diameter (minimum) [mm]	Inner diameter (maximum) [mm]	EAN	Content [metric]
15	SH-24X015-A	16	19	7612207304411	36 m
18	SH-24X018-A	19	22	7612207304428	36 m
20	SH-24X020-A	21	24	7612207304435	36 m
22	SH-24X022-A	23	26	7612207304442	36 m
25	SH-24X025-A	26	29	7612207304459	32 m
28	SH-24X028-A	29	32	7612207304466	32 m
32	SH-24X032-A	33	36	7612207350654	24 m
35	SH-24X035-A	36	39	7612207304343	24 m
42	SH-24X042-A	43	46	7612207304473	24 m
48	SH-24X048-A	49	52	7612207304480	24 m

Other information

Thickness tolerance
 9 - 13 mm ± 1,5 mm
 19 - 30 mm ± 2,5 mm
 < 32 mm ± 3 mm

Length tolerance ± 1,5 %

Sheet – standard. Grey

Item	Thickness [mm]	Length [m]	EAN	Content [metric]
SH-10-99	10	2	7612207279993	13 m ²
SH-20-99	20	2	7612207133172	7 m ²

Other information

Thickness tolerance
 10 ± 1,5 mm
 20 ± 2 mm

Length tolerance ± 1,5 %

Width tolerance ± 2 %

SH/Armaflex Tapes

Item	Content [quantity]
SH-TAPE	12 roll
SH-TAPE/6	6 roll

Tape – PVC

Item	EAN	Content [quantity]
SH-TAPE/PVC	7612207119459	72 roll

Adhesives and Cleaners

Item	Description	Content [quantity]
ADH520/0,25E	0.25 litre tins of ArmaFlex 520 adhesive with built-in brush, packed in a carton.	24 tin
ADH520/1,0E	1.0 litre tins of ArmaFlex 520 adhesive packed in a carton.	12 tin
ADH520/2,5E	2.5 litre tins of ArmaFlex 520 adhesive packed in a carton.	8 tin
ADH-SF990/0,8	ArmaFlex SF990 adhesive. Available in 0.8 litre cans	12 tin
ADH-RS850/0,5	ArmaFlex RS850 adhesive. Available in 0.5 litre cans.	6 tin
CLEANER/1,0	Special cleaner for use with ArmaFlex adhesives	4 tin
SF-CLEANER/1,0	Solvent-free cleaner for use with ArmaFlex	6 tin